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CENTERS·OF EXCELLENCE

ANNUAL REPORT

Fiscal Year July 2000—June 2001

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December, 2001

TO: RECIPIENTS OF THE 2000-2001 UTAH CENTERS OF EXCELLENCE PROGRAM ANNUAL REPORT

The Annual Report for the Utah Centers of Excellence Program summarizes the achievements of the program during the fiscal year July 1, 2000 through June 30, 2001 and, in addition, summarizes the funding allocations for the current 2001-2002 fiscal year. To make this year's report easier to read and more cost efficient, this report has been condensed, emphasizing the Centers themselves. If you would like a more detailed report, including the current activity for this year's funded Centers and previous Centers, please visit our web site at www.dced.state.ut.us/techdev/ or contact the Centers of Excellence office at (801) 538-8616.

Since the founding of the Centers of Excellence Program in 1986, the Annual Report has summarized the financial and business accomplishments in terms of dollars granted, matching funds received, jobs created in both Centers and businesses, and other statistical data.

The Centers of Excellence Program continues to be one of the nation's most successful technology commercialization programs as measured by matching dollars, significant new commercialized products, and state economic impact. We believe that with a continued and strengthened emphasis on the importance of commercialization and with the ongoing support of the new enhancements described, the Centers of Excellence Program will have an ever expanding and important role to play in Utah's economic future.

Respectfully submitted,

David B. Winder, Executive Director
Department of Community & Economic Development

Richard Bradford, Deputy Director
Department of Community & Economic Development

Robert C. Fuehr, Director
Division of Business and Economic Development

Executive Summary

The Utah State Legislature established the Centers of Excellence Program (COEP) in 1986. They recognized that the growth of new industry and expansion of existing industry is highly dependent on a strong technology base, new ideas, concepts, innovations, and prototypes. Furthermore, the Legislature approved the annual allocation of economic development funds to the COEP, to be awarded to college and university faculty on a competitive basis.

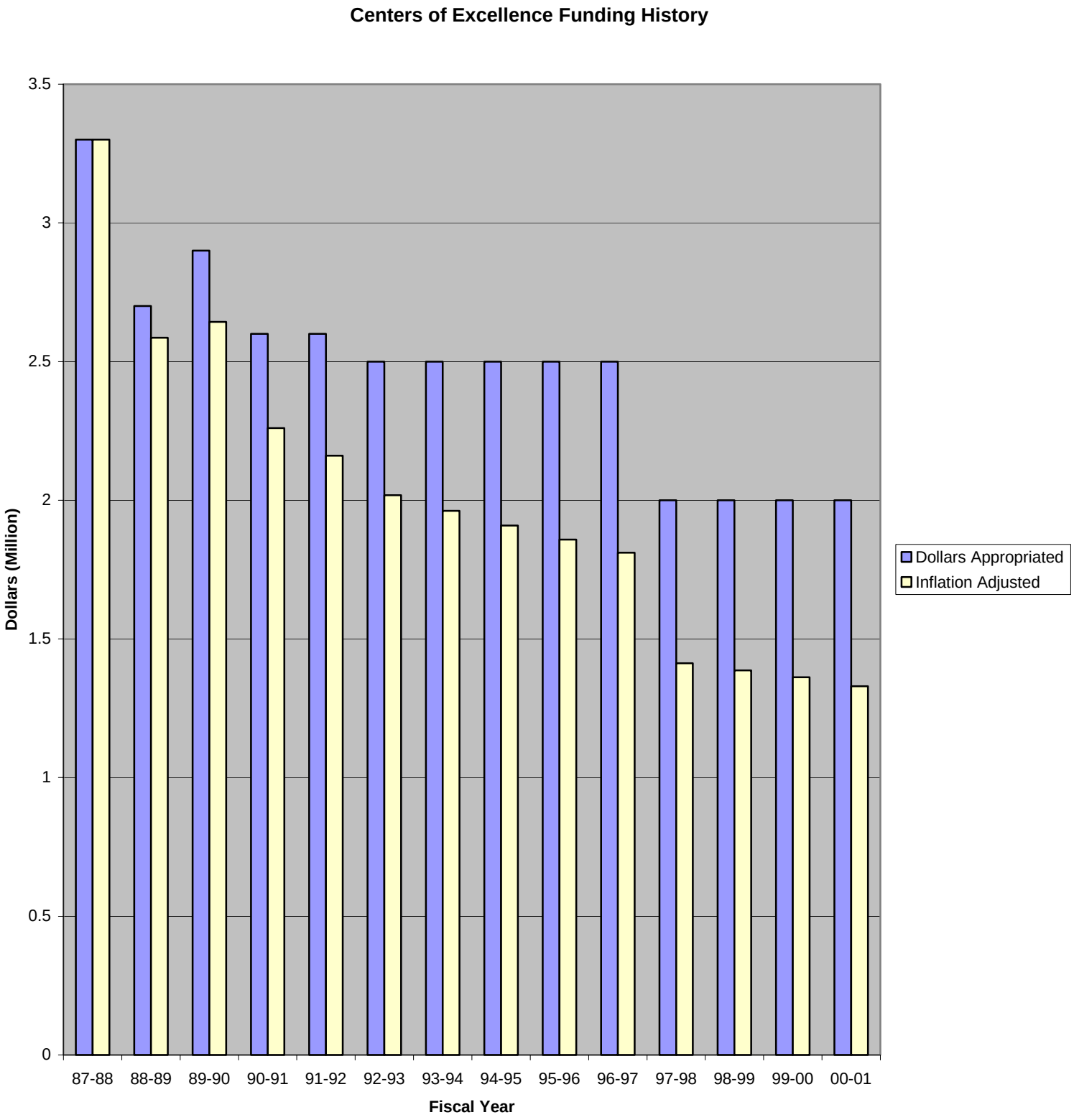
The goals of the COEP are to enhance and expand selected applied research and development activities at Utah's institutions of higher education, focused on the development of technologies which have potential for economic development in the state; and to assist in the actual commercialization of those technologies in concert with the technology licensing offices at the respective institution. The proprietary value of technologies created is reflected in the number of patents/copyrights issued, which produce royalty-bearing licenses that are signed by businesses. The economic impact is the sum effect of the creation of new companies, the enhancement of business opportunities for existing companies that license COEP technologies, and in the growth of Utah's job opportunities.

During the 2000-2001 fiscal year the Centers Program issued $1.870 million in grants to 16 active Centers for use in bringing significant new technologies closer to the marketplace. In the competitive selection process, 10 centers received continued funding and 6 new centers were selected for funding. The Center distribution with respective funding was as follows: seven at University of Utah ($900,000), four at Utah State University ($460,000), and four at Brigham Young University ($460,000). In addition, the program also funded the commercialization consulting effort, at a level of $7,000 per funded Center, for a total of $112,000.

The 16 Centers received matching funds of $13.4 million, resulting in a matching fund ratio of 7.2 to one. The cumulative state funding for the COEP between 1986 and 2001 was $33.7 million and the cumulative matching funds received was $356.1 million, resulting in a matching fund ratio of 10.6 to one. This is believed to be the highest in the nation for programs of this kind and represents a critically important leverage for success in the program.

Over the full life of the program, intellectual property created by faculty participating in the Centers of Excellence accounts for 170 patents resulting in 197 license agreements. Since the inception of the program, 142 companies have been created and licensed proprietary technology from the program. Currently, companies that trace their origins to the Centers of Excellence Program employ an estimated 1300 persons, in the high technology sector of the economy. The wage for this workforce averages $68,000 per year.

The Centers of Excellence Program continues to be one of the nation's most successful technology commercialization programs as measured by matching dollars, significant new commercialized products, and state economic impact. With strong emphasis on the importance of commercialization the program will have an ever expanding and important role to play in Utah's economic future.


Centers of Excellence Funding History
3.5
3
2.5
2
1.5
1
0.5
0
Dollars (Million)
87-88
88-89
89-90
90-91
91-92
92-93
93-94
94-95
95-96
96-97
97-98
98-99
99-00
00-01
Fiscal Year
Dollars Appropriated
Inflation Adjusted

PROGRAM DESCRIPTION

BACKGROUND

The Utah State Legislature created the Centers of Excellence Program (COEP) in 1986 recognizing that the growth of new industry and expansion of existing industry requires a strong technology base, new ideas, concepts, innovations, and prototypes. The Legislature recommended the allocation of economic development funds each year to the COEP, to be awarded to college and university faculty on a competitive basis. The objectives of the COEP are to enhance and expand the applied technical research activities at institutions of higher education in Utah, to develop technologies that are considered to have potential for economic development in the state, and to assist in the actual commercialization of those technologies. This research and technology commercialization process ultimately results in the creation of new companies, the enhancement of business opportunities for existing companies that license COEP technologies, and in the growth of Utah's job opportunities. In addition, the proprietary value of technologies created is reflected in the number of patents issued and the associated royalty-bearing licenses that are signed.

These measurement parameters (jobs created, companies assisted and/or created, inventions disclosed or patents issued, and license agreements signed) are summarized in this report as indicators of the value of the COEP to state economic development.

Ongoing funding of the program has been based upon the real and potential economic impact that the Centers of Excellence Program has had upon the State of Utah during the years since its creation. This Annual Report summarizes the significant accomplishments of the program during the recently completed fiscal year and attempts to identify the long-term economic value of that work.

OPERATIONS AND OBJECTIVES

The operating methods of the Centers Program have evolved over the years since its inception with a continuing goal of achieving the maximum economic benefit from the individual Centers that have been created. Upon selection on a competitive basis, new Centers are funded with a minimum requirement of a 2:1 matching fund ratio from the private and federal sectors. Matching funds are reported and audited on a regular basis. Centers are also audited regularly for the achievement of technical and commercial milestones. Center directors are required to submit annual reports to the COEP director. The Centers of

Excellence Program Annual Report, here attached, is based on submitted reports and upon information gathered from site visits, audits and other data sources. In addition, each funded Center is assisted by one or more designated commercialization consultants who assist Center directors in defining commercialization strategies, performing market and competitive analysis and locating potential investors or licensees.

Centers are normally funded for a maximum of five years and are then expected to be self-sustaining through license contract royalties and new research grants. Centers with especially noteworthy histories and ongoing technological impact are designated as Distinguished Centers and thereafter may be funded on a project-by-project basis as requests are approved.

CENTER SELECTION PROCESS

Proposals from researchers for new Centers of Excellence or for renewal of existing Centers of Excellence are submitted to the COEP office in response to a Request for Proposal which is normally sent in late December. The incoming proposals are critically reviewed by the Centers of Excellence Advisory Council. Centers are selected for funding based on a ranking established in extended review sessions with the Centers Advisory Council.

Since its inception, and through FY 2000-01, the program has created 95 Centers of Excellence, seven of which have been designated as Distinguished Centers, 55 have graduated, and 16 are active during this reporting period.

The State Advisory Council for Science and Technology has advisory responsibility for the Centers of Excellence Program by statute. Members of the Science Council participate on the Centers Advisory Council in reviewing proposals and conducting site visits. This provides Science Council members with in-depth knowledge of the program, Center specific information and a strong technical and industrial perspective for making funding decisions. The State Science Advisor reviews the Annual Report and presents it to the Science Council for acceptance. The Director of the Office of Technology Development serves as an ex-officio member of the State Advisory Council for Science and Technology.

COMMERCIALIZATION PROCESS

Over the past five years, the Centers of Excellence Program has funded a consulting program to assist Center directors in preparing and implementing

commercialization strategies. Each Center is unique in terms of which strategy is optimal - there is no single solution and each requires customized approaches.

Early market surveys and competitive analysis are conducted to discover which market segments are most promising and which product features will be of interest to potential customers and licensees. Consultants assist in targeting potential licensees for the technology and in positioning products for anticipated markets.

These early strategic discussions often reveal product variations that can be introduced to the marketplace earlier than previously planned. Such early commercialization has several benefits: (i) getting products to consumers for preliminary market validation and directional planning; (ii) early cash flow strengthens continuing research at the Center and hastens financial independence and; (iii) the future value of technology licenses are enhanced.

The Centers of Excellence Office works closely with the Technology Transfer Offices at the respective universities in an effort to extract maximum value from the licenses that are signed for Centers technologies. Through the commercialization consulting program, assistance is given in defining market opportunities, identifying potential target licensees, providing key information for license valuations, and consulting assistance to those companies considering license opportunities.